

# JOINT TUFTS/MIT COSMOLOGY SEMINAR

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## *Special Seminar: Evaluating the Gravitational Path Sum in Causal Set Quantum Gravity*

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UCSD

The functional integral for gravity poses numerous challenges, one of which is simply deciding the nature of the set of spacetime histories over which one should sum. I will propose an answer to this question in terms of a natural discretization of gravity, which is based on causal structure and the imposition of a finite number of degrees of freedom in a compact region of spacetime. Given a recently discovered form for an action functional on such histories, I begin a numerical exploration of some features of the resulting functional integral, including a characterization of the phase space of the analytically continued sum.

Tuesday, September 13, 2016, 2:30 pm  
574 Boston Ave, Room 316  
Tufts University

Refreshments at 2:00 outside room 304